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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/519,031	03/03/2000	Hitoshi Hashimoto	P/3541-4	6484

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EXAMINER

YE, LIN

ART UNIT PAPER NUMBER

2615

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/519,031

Applicant(s)

HASHIMOTO, HITOSHI

Examiner

Lin Ye

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 August 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: 2-6,8,9,11-13.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1 and 7.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: See Continuation Sheet

Continuation of 10. Other: The claims will be rejected as set Final in the previous Office Action.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 10/20/04 have been fully considered but they are not persuasive as to claims 1 and 7.

For claims 1 and 7, the applicant argues that the Arakawa reference does not teach or suggest "charge storage start timing" claimed in claims 1 and 7. The examiner disagrees. The claimed "charge storage start timing" is broad, and it only requires the photoelectric conversion elements belonging to the same photoelectric conversion element group in the imaging device **start to store charges** with the same timing and another group **start to store charges** with different timing. This limitation does not show a detail where and how to start to store charges. The examiner has to base on applicant's specification, "Detailed Description of The Invention" section, pages 23-25 and Figure 4 which explain the internal operation of the CCD to determine the means "charge storage start timing". Applicant discloses (See page 23, lines 2-26 and page 24, lines 1-25) in state **a** in Figure 4, each SUB discharge pulse sweeps away (reset) the signal charges accumulated in each of the photodiodes (for all group) 41. In state **b**, showing only the signal charges A accumulated in the photodiode group 41A to be transferred (readout and store) to the vertical transfer section 43, Immediately after that, **the signal charges accumulated in all the photodiodes 41** are swept away again by SUB discharge pulses (**This is unclear whether charges accumulated in all the photodiodes 41 are started same time or different time. It only show the start time for transferring charges from the group 41A to vertical transfer section 43 is**

different from the rest of the group 41B, 41C and 41D). In state C, following same operation, showing only the charges accumulated in the group 41A and 41B to be transferred to the vertical transfer section 43 (**the start time for transferring charge accumulated in the group B to vertical transfer section 43 is at state C**). In state D, following same operation, showing only the charges accumulated in the group 41B and 41C to be transferred to the vertical transfer section 43 (**the start time for transferring transfer charge accumulated in the group C to vertical transfer section 43 is at state D**). In state e, following same operation, showing only the charges accumulated in the group 41C and 41D to be transferred to the vertical transfer section 43 (**the start time for transferring transfer charge accumulated in the group D is at state e**). In state f, following same operation, showing only the charges accumulated in the group 41D to be transferred to the vertical transfer section 43 (The “exposure period” for each the group called by applicant is the time period for **transferring charge accumulated in the each group**). The claimed “charge storage start timing” in each of the photoelectric conversion element group is **the start timing for transferring charge accumulated in each of the photoelectric conversion element group to vertical transfer section 43**. The Arakawa reference clearly discloses in Figure 3A-E, at a time point t1, the first pixel group (odd lines pixel group 2n-1) starts to transfer (store) charges accumulated in the first pixel group to the accumulation region 4; and at a time point t2, the second pixel group (even lines pixel group 2n) starts to transfer (store) charges accumulated in the second pixel group to the accumulation region 5 (See Col. 5, lines 49-60). For those reasons, Arakawa reference discloses the control means for controlling **the charge storage start timing** for the photoelectric conversion elements

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(pixels) belonging to the same photoelectric conversion element group in the imaging device start to store charges with the same timing and the photoelectric conversion elements belonging to another photoelectric converting element group start to store charges with different timing.

The applicant also argues the Arakawa reference has nothing to do the problem of providing an electronic imaging device for an electronic still camera capable of high-speed automatic focusing operation; and applicant do see any proper motivation for one skilled in the art to combine the teachings of Arakawa and Suda for any purpose. The examiner disagrees. The Arakawa reference discloses a solid-state image-sensing device for an electronic camera. The Suda reference discloses the electronic camera including image-sensing devices, taking lens and auto focus signal processing circuit. The Suda reference teaches the auto focus signal processing circuit controlling to drive taking lens to an in-focus position on the basis of the result of comparing the high-frequency components of the image signals read from each of photoelectric conversion element groups (See page 5 [0081] and page 6, lines [011]). The examiner clearly provided the motivation for combine the teaching of Arakawa and Suda in the last office action. The Suda reference is evidence that one of ordinary skill in the art at the time to see more advantages the digital camera including a auto focus processing circuit for control driving the taking lens to the focus state on the basis of the image signal read from each of the photoelectric conversion element groups so that the object can be more accurately and fast focused regardless of whether the distance to object is long or short and user easily get high quality picture. For this reason, it would have been obvious to modify the Arakawa image device to providing a auto focuses processing circuit

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to drive the taking lens along the optical axis on the basis of the image signal read from each of the photoelectric conversion element groups in the imaging device as taught by Suda.

*Conclusion*

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (703) 305-3250. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lin Ye  
October 29, 2004



ANDREW CHRISTENSEN  
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